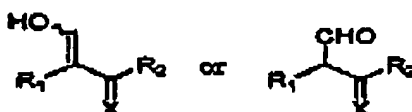


**PROPOSED EXAMINER'S AMENDMENT***U.S. Serial No 10/757,321**March 7, 2006*

1. (Currently Amended) A process to produce compounds represented by a formula (II);



(II)

or both

wherein

R<sub>1</sub> represents hydrogen, halogeno, alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, a group represented by R<sub>3</sub>S(O)<sub>q</sub>, a group represented by R<sub>4</sub>R<sub>5</sub>N, a group represented by R<sub>6</sub>C(=O), nitrile, nitro, a group represented by R<sub>7</sub>C(=NR<sub>8</sub>), aryl or aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, or aralkyl optionally substituted by halogen,

R<sub>2</sub> represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may

be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R<sub>4</sub> and R<sub>7</sub> each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

R<sub>8</sub> represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, nitrile, nitro, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

q represents 0, 1 or 2, and R<sub>9</sub> and R<sub>10</sub> each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, and

R<sub>1</sub> and R<sub>2</sub> each represents a group which may bond to jointly form a ring, and

X represents oxygen or a group represented by a formula of NR<sub>9</sub>R<sub>10</sub>,  
~~comprising reacting characterized in that the compound is subjected to a reaction with~~ a methylene compound represented by a formula (I);



(I)

wherein R<sub>1</sub>, R<sub>2</sub> and X are as defined above, with either a formic acid ester or an orthoformic acid ester in the presence of a Lewis acid and a base.

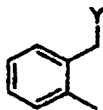
characterized in that the compound is subjected to a reaction with a methylene compound represented by a formula (I);



(I)

wherein R<sub>1</sub>, R<sub>2</sub> and X are as defined above, with either a formic acid ester or an orthoformic acid ester in the presence of a Lewis acid and a base.

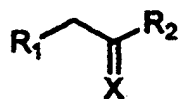
2. (Original) The production process according to claim 1, wherein the base is a tertiary amine.
3. (Original) The production process according to claim 1, wherein the group represented by R<sub>1</sub> in the formula (I) is a group represented by the following formula;



wherein Y represents a group to be eliminated when it is reacted with a nucleophilic reagent, optionally substituted phenoxy or optionally substituted heteroaryloxy, and the group represented by R<sub>2</sub> is a group represented by a formula of OR<sub>11</sub>, wherein R<sub>11</sub> represents lower alkyl.

4. (Original) The production process according to claim 1, wherein the compound represented by the formula (I) is methyl 2-[(2-isopropoxy-6-trifluoromethylpyrimidine-4-yl)oxymethyl] phenylacetate.

5. (Currently Amended) ~~A compound~~ Compound represented ~~[[a]]~~ by formula (I),



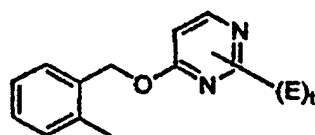
(I)

wherein

R<sub>2</sub> represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

X represents oxygen or a group represented by a formula of NR<sub>9</sub>R<sub>10</sub> wherein R<sub>9</sub> and R<sub>10</sub> each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, and

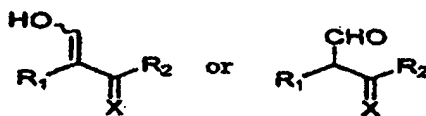
the group represented by R<sub>1</sub> is a group represented by the following formula;



wherein E represents C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>1-8</sub> alkoxy, C<sub>1-6</sub> haloalkoxy, optionally substituted amino, a group represented by a formula of R<sub>26</sub>S(O)<sub>p</sub>, wherein R<sub>26</sub> represents alkyl or aryl and p represents 0, 1 or 2, aralkyl optionally substituted by halogen, aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic

or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, optionally substituted heteroaryloxy, a group having an alicyclic structure, nitrile, nitro, alkoxycarbonyl, formyl or carboxyl, t represents 0, 1, 2 or 3, provided E each represents a same or different group when t is an integer of 2 or more integer.

6. (Currently Amended) Compounds represented by a formula (II),



(II)

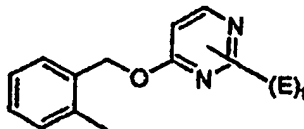
or both

wherein

R<sub>2</sub> represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

X represents oxygen or a group represented by a formula of NR<sub>9</sub>R<sub>10</sub> wherein R<sub>9</sub> and R<sub>10</sub> each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, and

the group represented by R<sub>1</sub> is a group represented by the following formula;

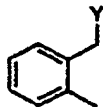


wherein E represents C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>1-8</sub> alkoxy, C<sub>1-6</sub> haloalkoxy, optionally substituted amino, a group represented by a formula of R<sub>26</sub>S(O)<sub>p</sub>, wherein R<sub>26</sub>

represents alkyl or aryl and p represents 0, 1 or 2, aralkyl optionally substituted by halogen, aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, optionally substituted heteroaryloxy, a group having an alicyclic structure, nitrile, nitro, alkoxycarbonyl, formyl or carboxyl, t represents 0, 1, 2 or 3, provided E each represents a same or different group when t is an integer of 2 or more ~~integer~~.

7-11. (Canceled)

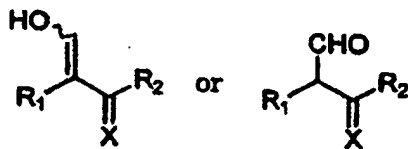
7 ~~42.~~ (Original) The production process according to claim 1, wherein the group represented by the formula (II) is a group represented by the following formula;



wherein Y represents a group to be eliminated when it is reacted with a nucleophilic reagent, optionally substituted phenoxy or optionally substituted heteroaryloxy, and the group represented by  $R_2$  is a group represented by a formula of  $OR_{11}$ , wherein  $R_{11}$  represents lower alkyl.

13-40. (Canceled)

8 ~~41.~~ (Currently Amended) An after-treatment process in a step to produce compounds represented by a formula (II);



(II)

or both

wherein

$R_1$  represents hydrogen, halogeno, alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, a group represented by  $R_3S(O)_q$ , a group represented by  $R_4R_5N$ , a group represented by  $R_6C(=O)$ , nitrile, nitro, a group represented by  $R_7C(=NR_8)$ , aryl or aryloxy optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, or aralkyl optionally substituted by halogen,

$R_2$  represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

$R_3$ ,  $R_4$  and  $R_5$  each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

$R_6$  and  $R_7$  each independently represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, a group having an alicyclic structure, optionally substituted amino, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,



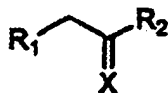
$R_8$  represents alkyl optionally substituted by alkoxy, alkylthio or halogen, alkoxy optionally substituted by halogen or aryl, nitrile, nitro, aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl, optionally substituted heterocyclic or heteroaryl having a 5 to 7 membered mono cyclic or 9 to 11 membered fused ring containing 1 to 3 nitrogen or oxygen, or aralkyl optionally substituted by halogen,

$q$  represents 0, 1 or 2,

$R_1$  and  $R_2$  each represents a group which may bond to jointly form a ring, and

$X$  represents oxygen or a group represented by a formula of  $NR_9R_{10}$  wherein  $R_9$  and  $R_{10}$  each independently represents hydrogen, lower alkyl or aryl optionally substituted by alkoxy, halogen or alkyl which may be substituted by halogen, phenoxy or heteroaryloxy which may be substituted by haloalkyl, alkyl, alkoxy, haloalkoxy, amino, nitrile, alkylthio, alkylsulfonyl or alkylsulfinyl,

by reacting a methylene compound represented by a general formula (I);



(I)

wherein  $R_1$ ,  $R_2$  and  $X$  are as defined above, with either an formic acid ester or an orthoformic acid ester in the presence of a Lewis acid and a base, characterized in that the after-treatment process contains a step to add water following to an addition of  $C_{1-4}$  organic acid into the reacted solution to improve the separating property of the solution.

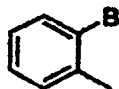
9 ~~42~~.

(Currently Amended) The after-treatment process according to claim <sup>8</sup>~~41~~, characterized by using the  $C_{1-4}$  organic acid in an amount of 2.5 times mole or more of the ~~the~~ Lewis acid to be used.

10 ~~43~~.

(Original) The after-treatment process according to claim <sup>8</sup>~~41~~, wherein the  $C_{1-4}$  organic acid is acetic acid.

- 11<sup>44</sup>. (Original) The after-treatment process according to claim <sup>8</sup>41, wherein the Lewis acid is titanium tetrachloride.
- 12<sup>45</sup>. (Original) The after-treatment process according to claim <sup>8</sup>41, wherein the base is triethylamine.
- 13<sup>46</sup>. (Original) The after-treatment process according to claim <sup>8</sup>41, wherein the group represented by R<sub>1</sub> in the compound represented by the formula (I) is a group represented by the following formula;



wherein B represents hydrogen, lower alkyl, lower alkoxy, haloalkyl, optionally substituted arylsulfonyloxyalkyl or optionally substituted lower alkylsulfonyloxyalkyl, and the group represented by R<sub>2</sub> is a group represented by a formula of OR<sub>23</sub>, wherein R<sub>23</sub> represents lower alkyl, and B and R<sub>23</sub> are a group which may bond to jointly form a ring.